FIG. 1

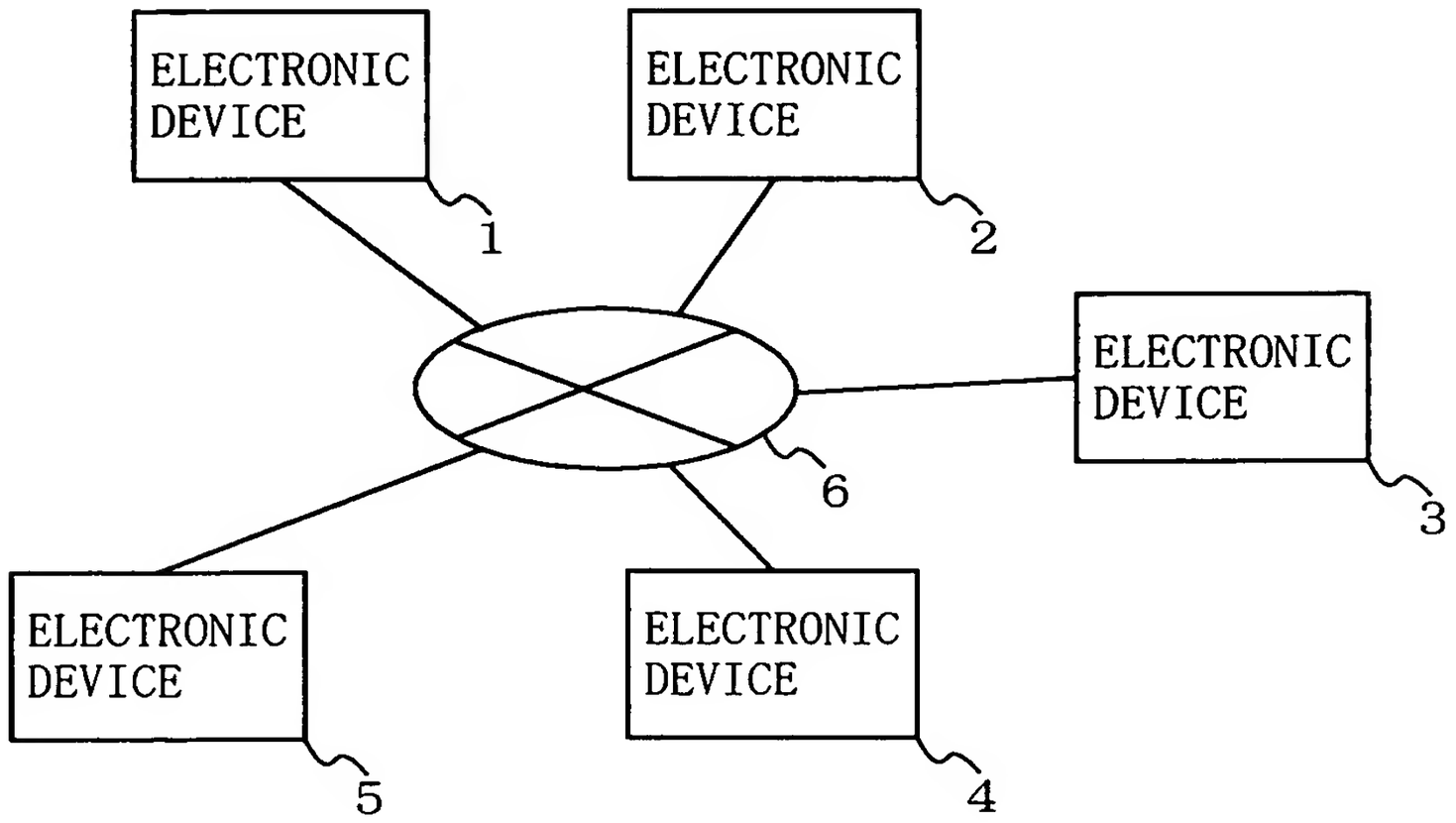
ELECTRONIC DEVICE
1
ELECTRONIC DEVICE
2
ELECTRONIC DEVICE
3
6
ELECTRONIC DEVICE
5
ELECTRONIC DEVICE
4

FIG. 2

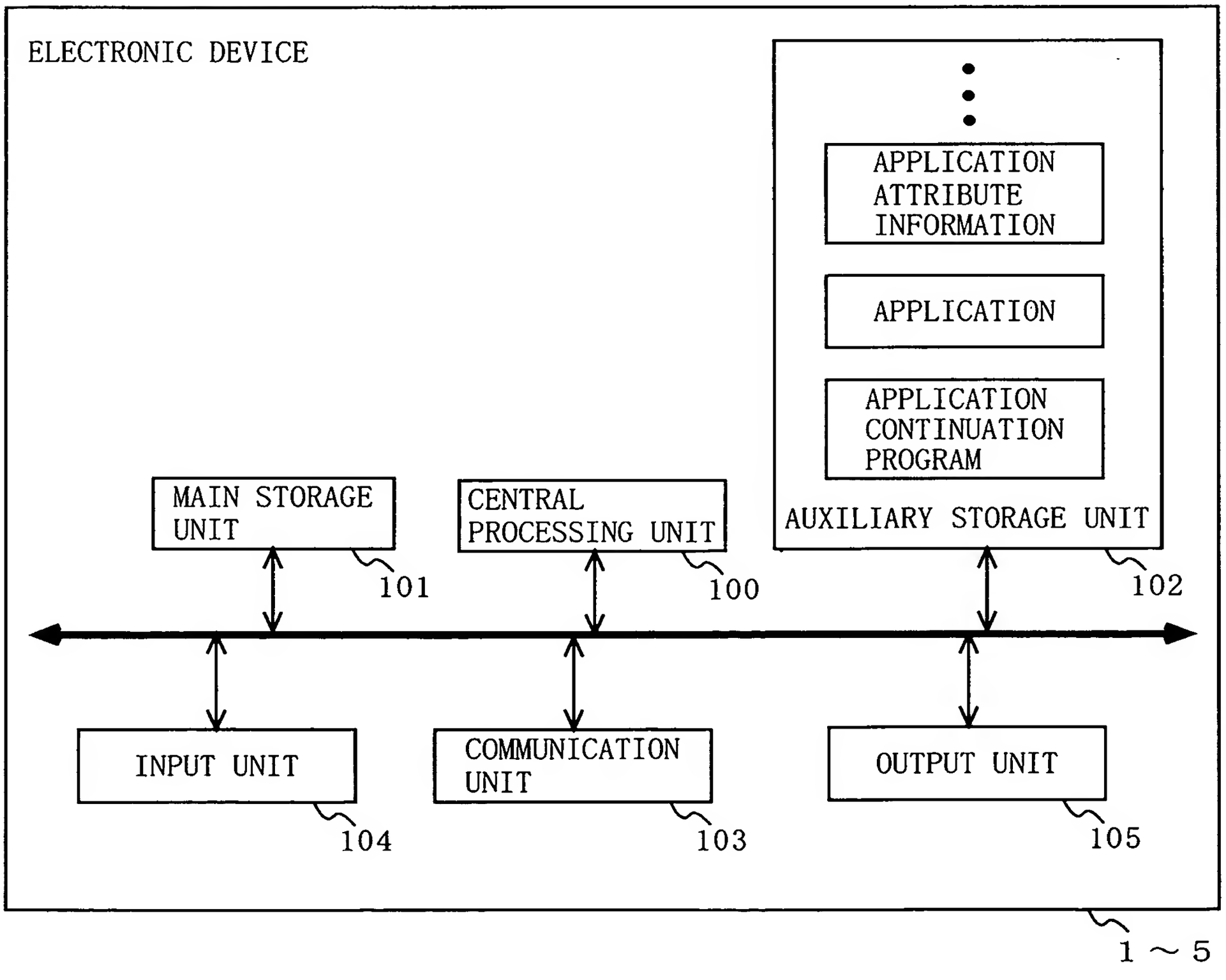
ELECTRONIC DEVICE
APPLICATION ATTRIBUTE INFORMATION
APPLICATION
APPLICATION CONTINUATION PROGRAM
AUXILIARY STORAGE UNIT
102
MAIN STORAGE UNIT
101
CENTRAL PROCESSING UNIT
100
INPUT UNIT
104
COMMUNICATION UNIT
103
OUTPUT UNIT
105
1 ~ 5

FIG. 3

APPLICATION NAME	“Contents Recorder”
APPLICATION SOURCE	http://www.distributer.xxx
MAIN CLASS NAME	com.panasonic.applet
REQUIRED PROFILE	CDC／CVM
REQUIRED RESOURCE	RAM 800KB
LAST UPDATE DATE	2004/01/01 18:00
VERSION NUMBER	1.04
APPLICATION SIZE	174KB
APPLICATION CREATOR	“Panasonic CAC”
SUBSTITUTIVE APPLICATION	“Media Recorder”
APPLICATION ABLE TO BE SUBSTITUTED	“Contents Mirroring”

FIG. 4

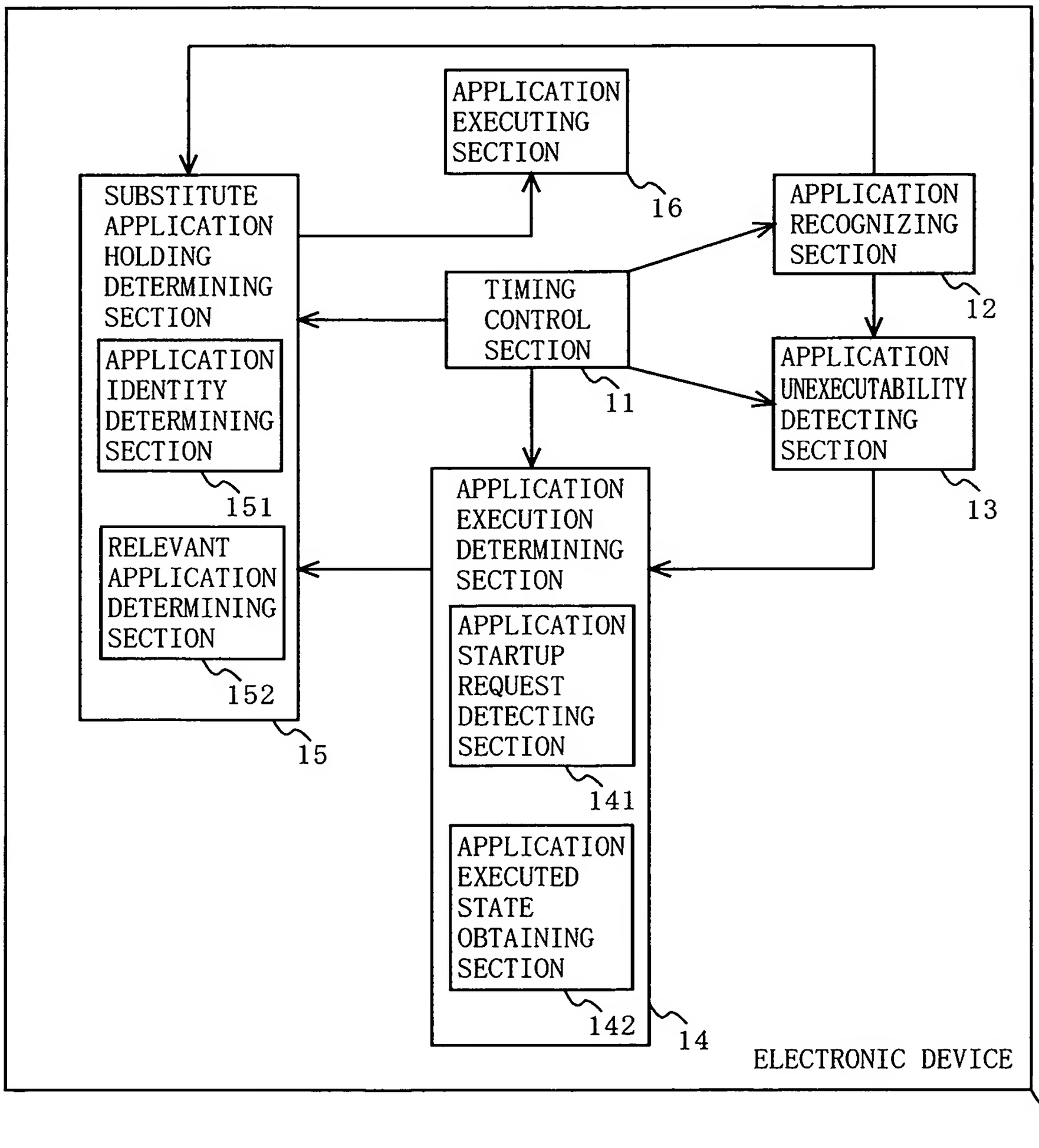
APPLICATION EXECUTING SECTION
16
SUBSTITUTE APPLICATION HOLDING DETERMINING SECTION
APPLICATION IDENTITY DETERMINING SECTION
151
RELEVANT APPLICATION DETERMINING SECTION
152
15
APPLICATION RECOGNIZING SECTION
12
TIMING CONTROL SECTION
11
APPLICATION UNEXECUTABILITY DETECTING SECTION
13
APPLICATION EXECUTION DETERMINING SECTION
APPLICATION STARTUP REQUEST DETECTING SECTION
141
APPLICATION EXECUTED STATE OBTAINING SECTION
142
14
ELECTRONIC DEVICE
1

FIG. 5

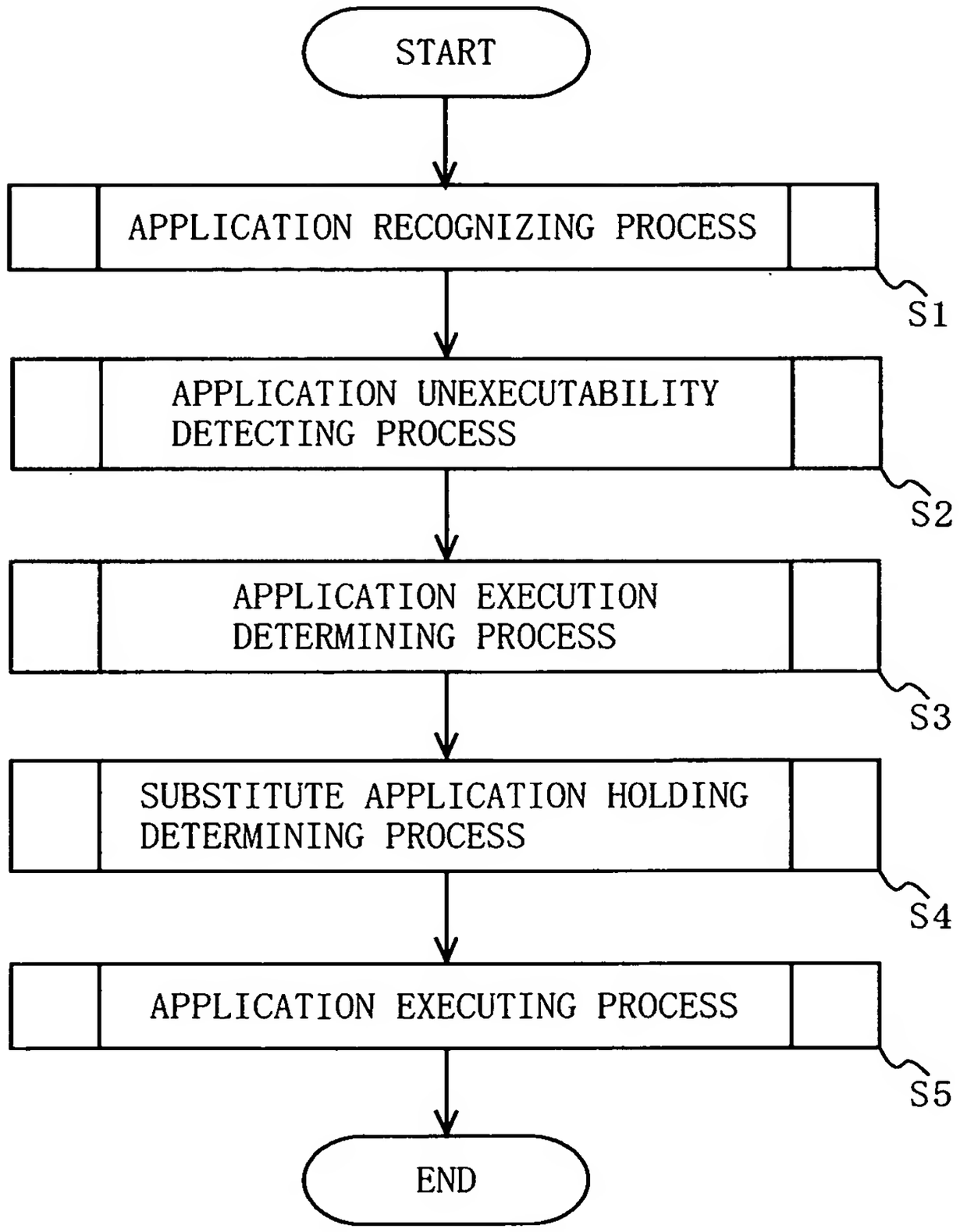
START
APPLICATION RECOGNIZING PROCESS
S1
APPLICATION UNEXECUTABILITY DETECTING PROCESS
S2
APPLICATION EXECUTION DETERMINING PROCESS
S3
SUBSTITUTE APPLICATION HOLDING DETERMINING PROCESS
S4
APPLICATION EXECUTING PROCESS
S5
END

FIG. 6

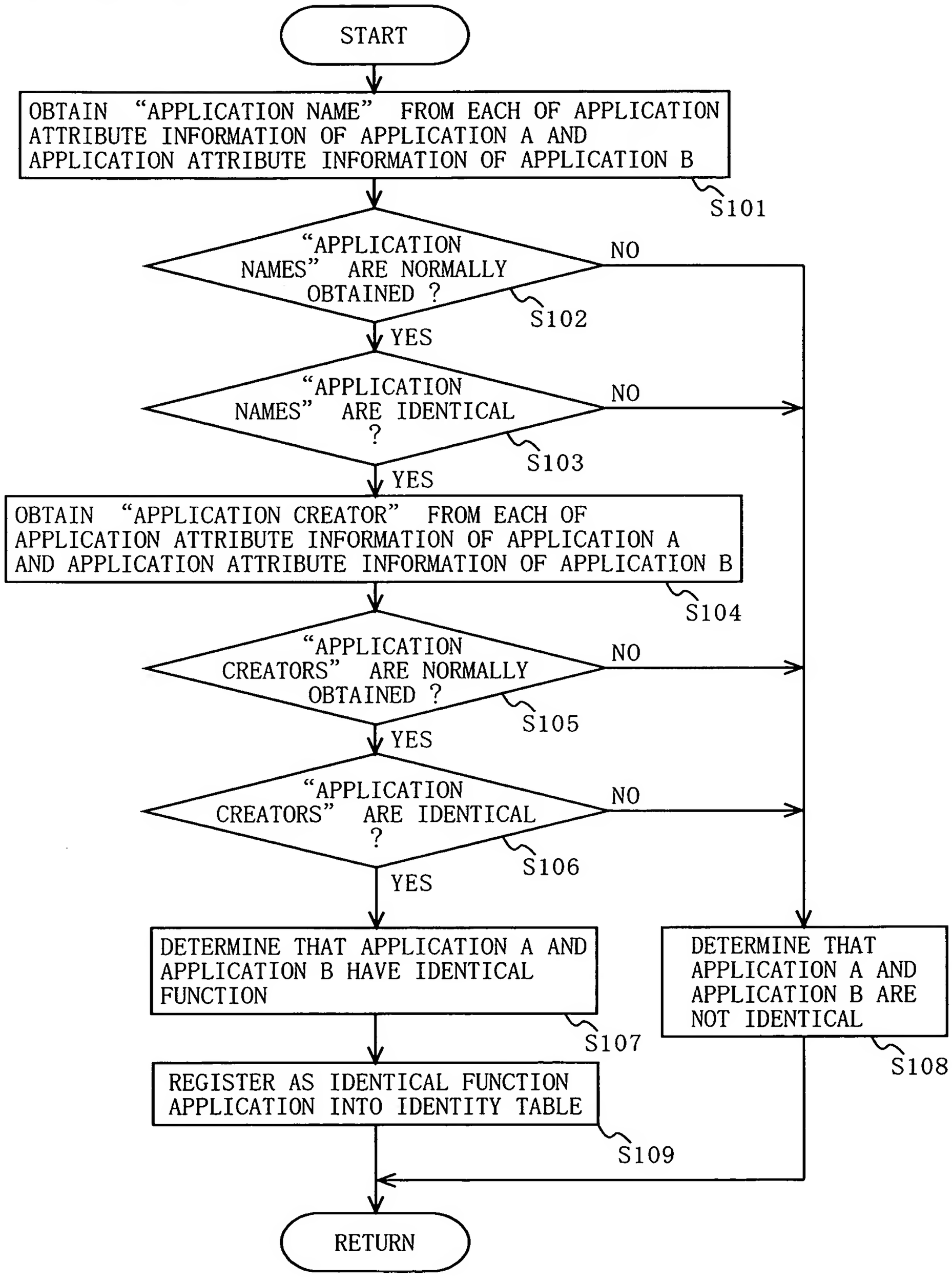
START
OBTAIN "APPLICATION NAME" FROM EACH OF APPLICATION ATTRIBUTE INFORMATION OF APPLICATION A AND APPLICATION ATTRIBUTE INFORMATION OF APPLICATION B
S101
"APPLICATION NAMES" ARE NORMALLY OBTAINED ?
NO
S102
YES
"APPLICATION NAMES" ARE IDENTICAL ?
NO
S103
YES
OBTAIN "APPLICATION CREATOR" FROM EACH OF APPLICATION ATTRIBUTE INFORMATION OF APPLICATION A AND APPLICATION ATTRIBUTE INFORMATION OF APPLICATION B
S104
"APPLICATION CREATORS" ARE NORMALLY OBTAINED ?
NO
S105
YES
"APPLICATION CREATORS" ARE IDENTICAL ?
NO
S106
YES
DETERMINE THAT APPLICATION A AND APPLICATION B HAVE IDENTICAL FUNCTION
S107
DETERMINE THAT APPLICATION A AND APPLICATION B ARE NOT IDENTICAL
S108
REGISTER AS IDENTICAL FUNCTION APPLICATION INTO IDENTITY TABLE
S109
RETURN

FIG. 7

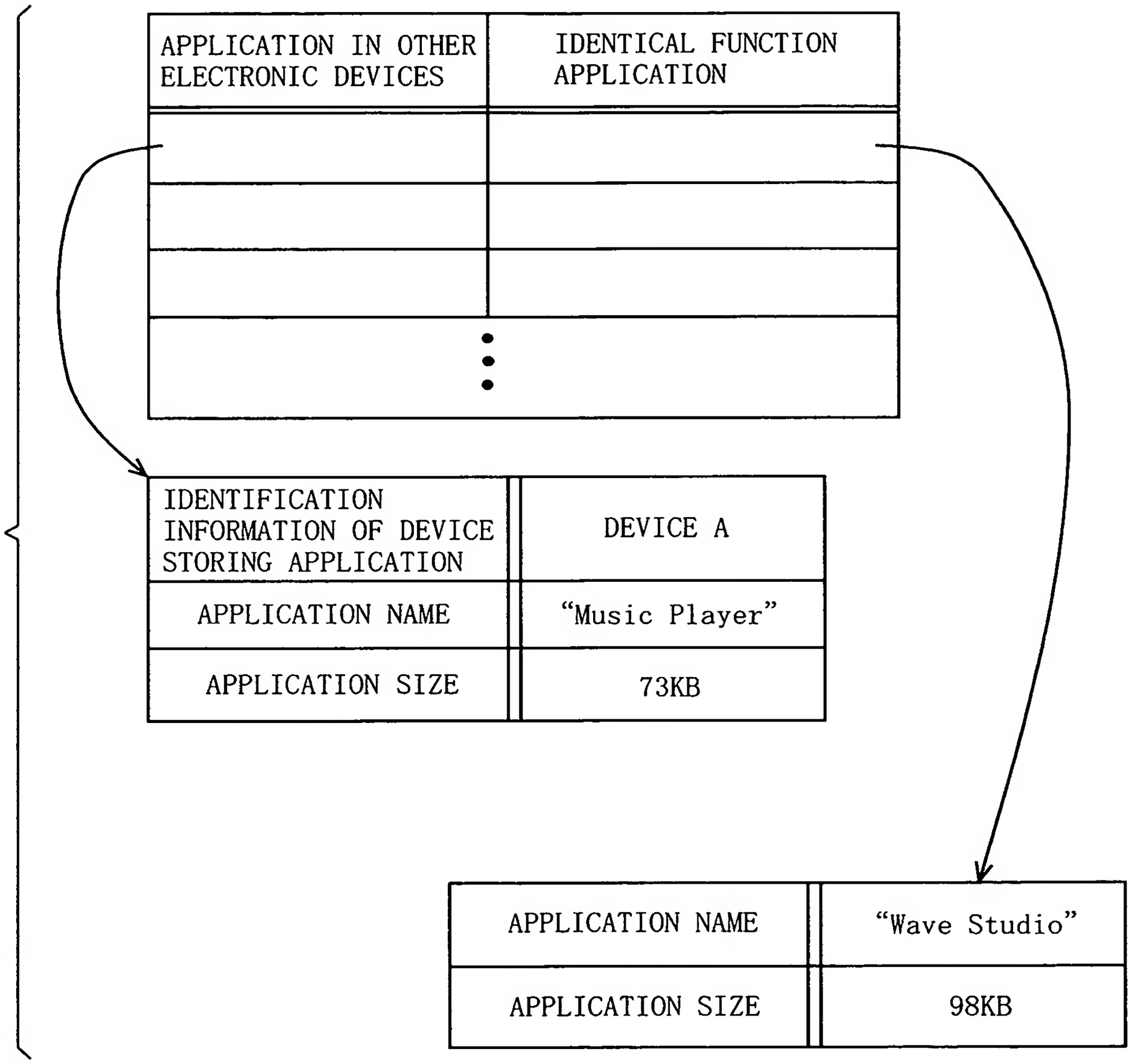
APPLICATION IN OTHER ELECTRONIC DEVICES
IDENTICAL FUNCTION APPLICATION
IDENTIFICATION INFORMATION OF DEVICE STORING APPLICATION
DEVICE A
APPLICATION NAME
"Music Player"
APPLICATION SIZE
73KB
APPLICATION NAME
"Wave Studio"
APPLICATION SIZE
98KB

FIG. 8

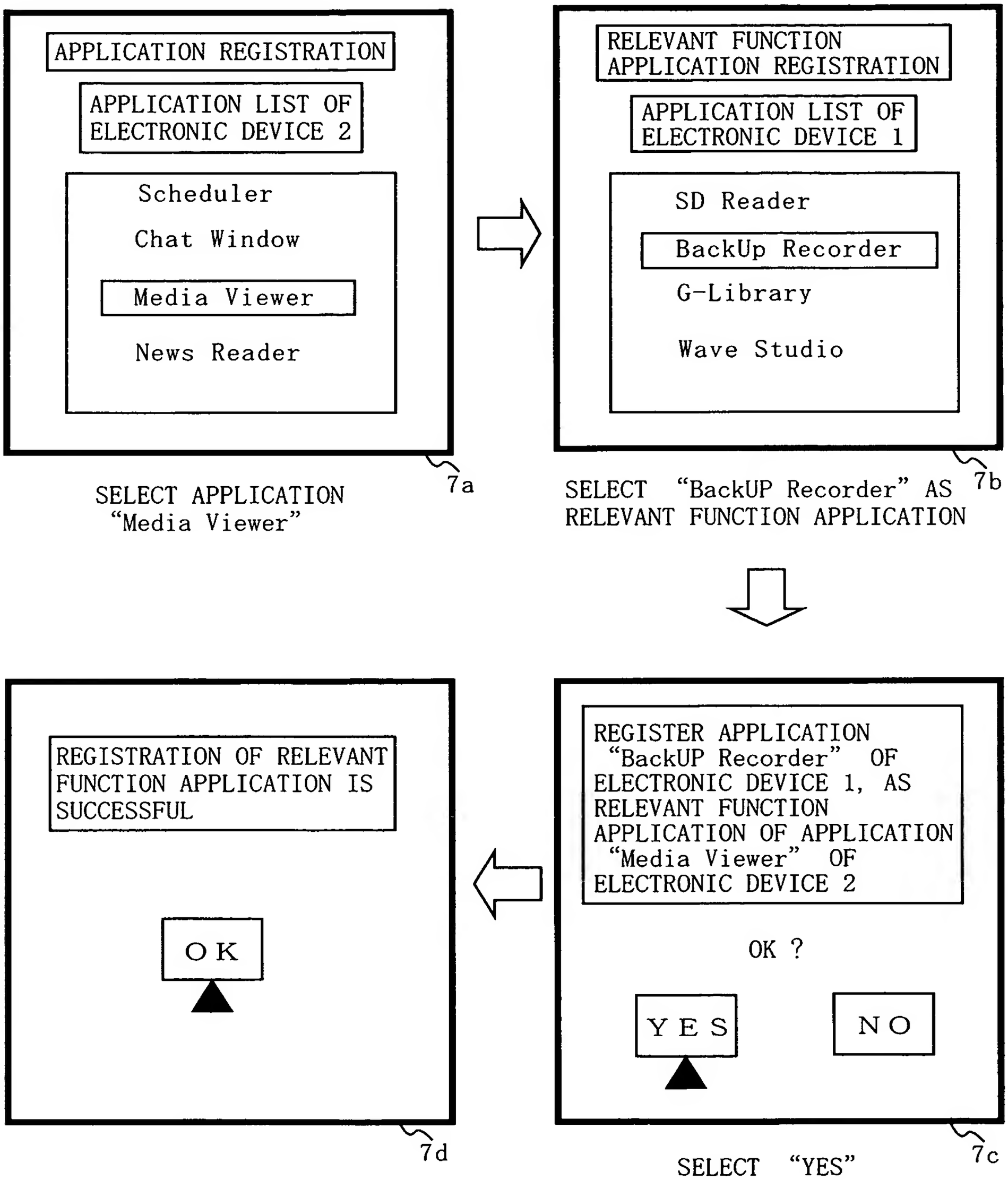
APPLICATION REGISTRATION
APPLICATION LIST OF ELECTRONIC DEVICE 2
Scheduler
Chat Window
Media Viewer
News Reader
7a
SELECT APPLICATION "Media Viewer"
RELEVANT FUNCTION APPLICATION REGISTRATION
APPLICATION LIST OF ELECTRONIC DEVICE 1
SD Reader
BackUp Recorder
G-Library
Wave Studio
7b
SELECT "BackUP Recorder" AS RELEVANT FUNCTION APPLICATION
REGISTER APPLICATION "BackUP Recorder" OF ELECTRONIC DEVICE 1, AS RELEVANT FUNCTION APPLICATION OF APPLICATION "Media Viewer" OF ELECTRONIC DEVICE 2
OK ?
YES
NO
7c
SELECT "YES"
REGISTRATION OF RELEVANT FUNCTION APPLICATION IS SUCCESSFUL
OK
7d

FIG. 9

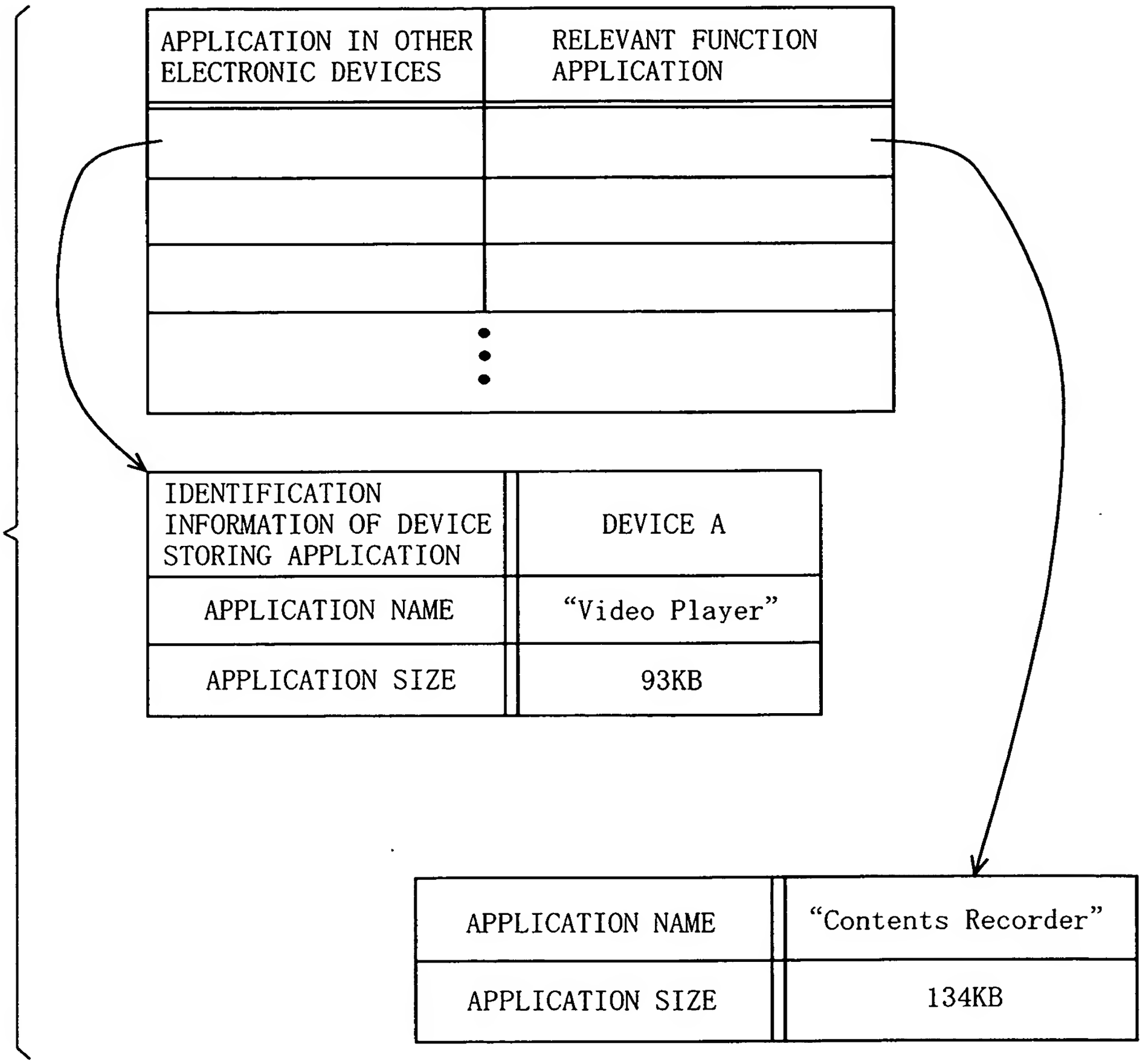
APPLICATION IN OTHER ELECTRONIC DEVICES
RELEVANT FUNCTION APPLICATION
IDENTIFICATION INFORMATION OF DEVICE STORING APPLICATION
DEVICE A
APPLICATION NAME
"Video Player"
APPLICATION SIZE
93KB
APPLICATION NAME
"Contents Recorder"
APPLICATION SIZE
134KB

FIG. 10

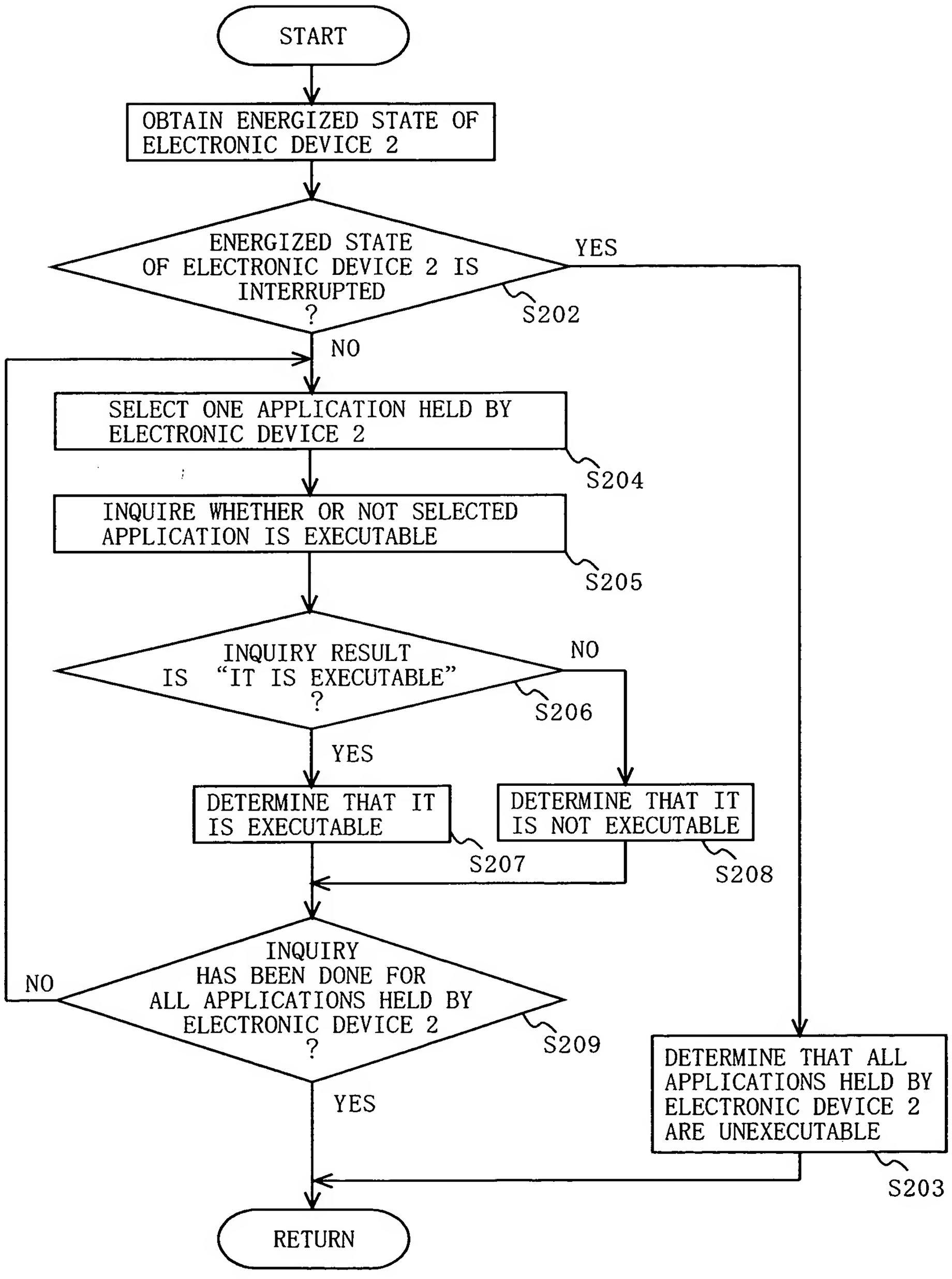
START
OBTAIN ENERGIZED STATE OF ELECTRONIC DEVICE 2
ENERGIZED STATE OF ELECTRONIC DEVICE 2 IS INTERRUPTED ?
YES
S202
NO
SELECT ONE APPLICATION HELD BY ELECTRONIC DEVICE 2
S204
INQUIRE WHETHER OR NOT SELECTED APPLICATION IS EXECUTABLE
S205
INQUIRY RESULT IS "IT IS EXECUTABLE" ?
NO
S206
YES
DETERMINE THAT IT IS EXECUTABLE
S207
DETERMINE THAT IT IS NOT EXECUTABLE
S208
INQUIRY HAS BEEN DONE FOR ALL APPLICATIONS HELD BY ELECTRONIC DEVICE 2 ?
NO
S209
YES
DETERMINE THAT ALL APPLICATIONS HELD BY ELECTRONIC DEVICE 2 ARE UNEXECUTABLE
S203
RETURN

FIG. 11

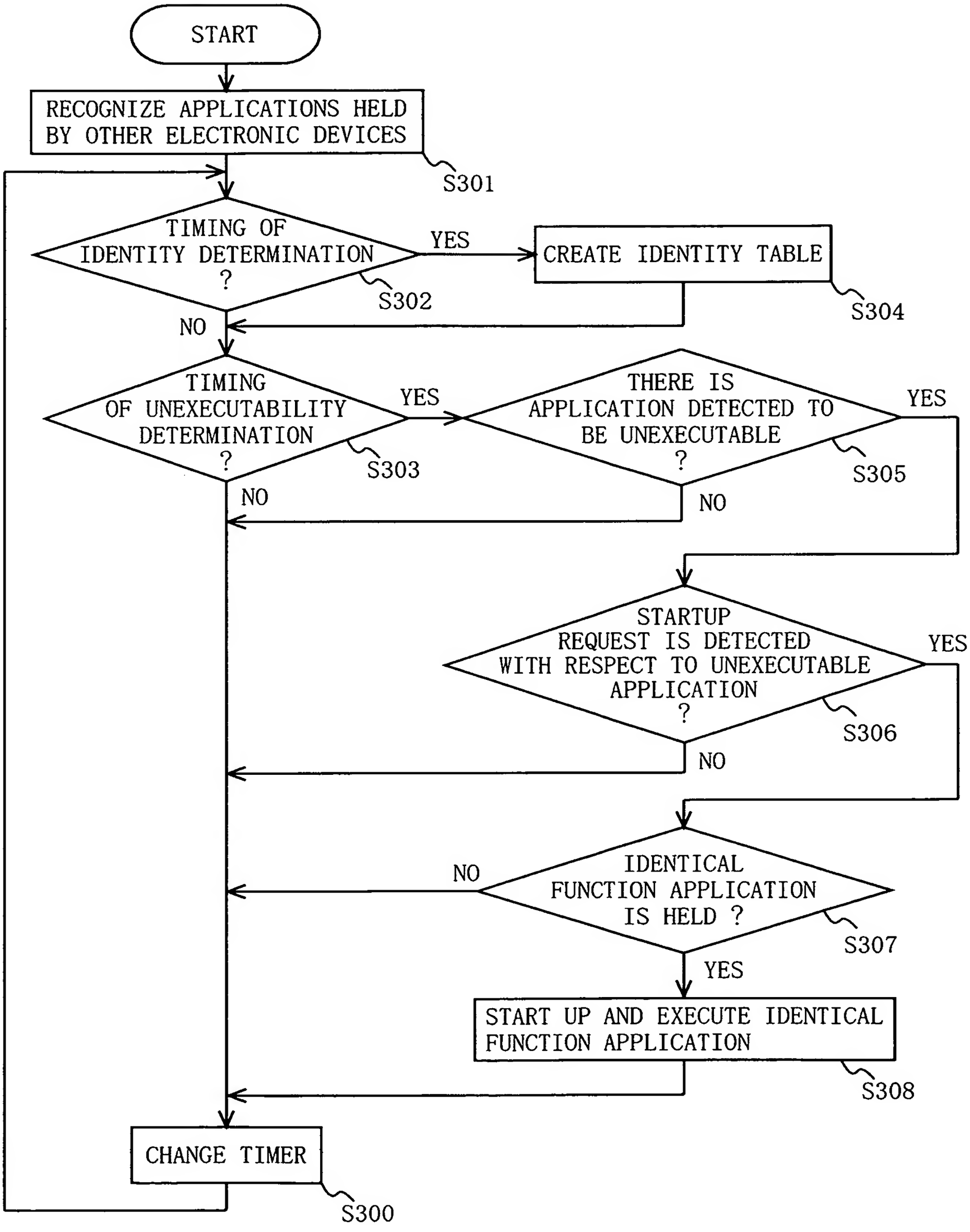
START
RECOGNIZE APPLICATIONS HELD BY OTHER ELECTRONIC DEVICES
S301
TIMING OF IDENTITY DETERMINATION ?
YES
S302
CREATE IDENTITY TABLE
S304
NO
TIMING OF UNEXECUTABILITY DETERMINATION ?
YES
S303
THERE IS APPLICATION DETECTED TO BE UNEXECUTABLE ?
YES
S305
NO
NO
STARTUP REQUEST IS DETECTED WITH RESPECT TO UNEXECUTABLE APPLICATION ?
YES
S306
NO
IDENTICAL FUNCTION APPLICATION IS HELD ?
NO
S307
YES
START UP AND EXECUTE IDENTICAL FUNCTION APPLICATION
S308
CHANGE TIMER
S300

FIG. 12

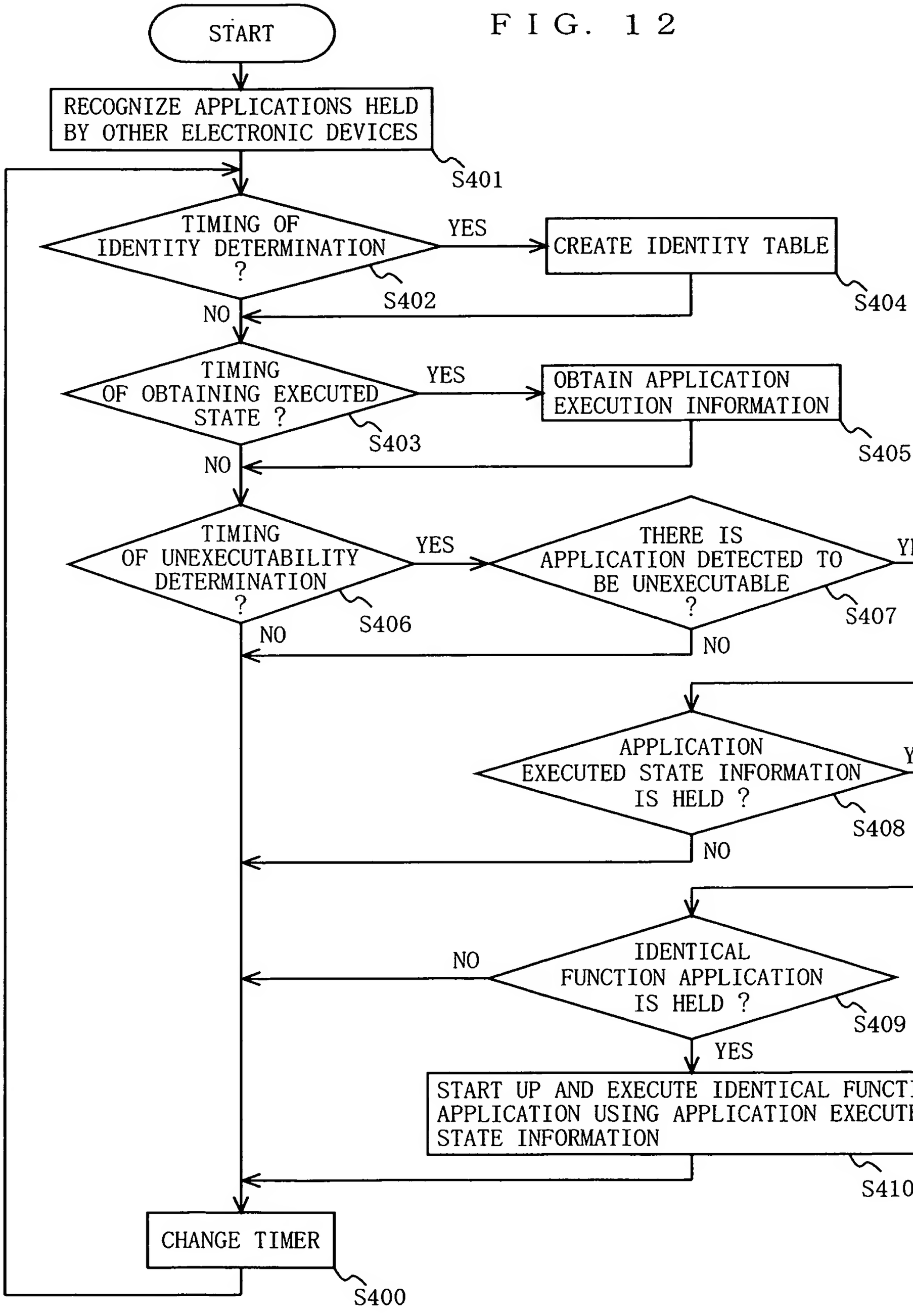
START
RECOGNIZE APPLICATIONS HELD BY OTHER ELECTRONIC DEVICES
S401
TIMING OF IDENTITY DETERMINATION ?
YES
CREATE IDENTITY TABLE
S404
S402
NO
TIMING OF OBTAINING EXECUTED STATE ?
YES
OBTAIN APPLICATION EXECUTION INFORMATION
S405
S403
NO
TIMING OF UNEXECUTABILITY DETERMINATION ?
YES
THERE IS APPLICATION DETECTED TO BE UNEXECUTABLE ?
YES
S407
S406
NO
NO
APPLICATION EXECUTED STATE INFORMATION IS HELD ?
YES
S408
NO
NO
IDENTICAL FUNCTION APPLICATION IS HELD ?
S409
YES
START UP AND EXECUTE IDENTICAL FUNCTION APPLICATION USING APPLICATION EXECUTED STATE INFORMATION
S410
CHANGE TIMER
S400

FIG. 13

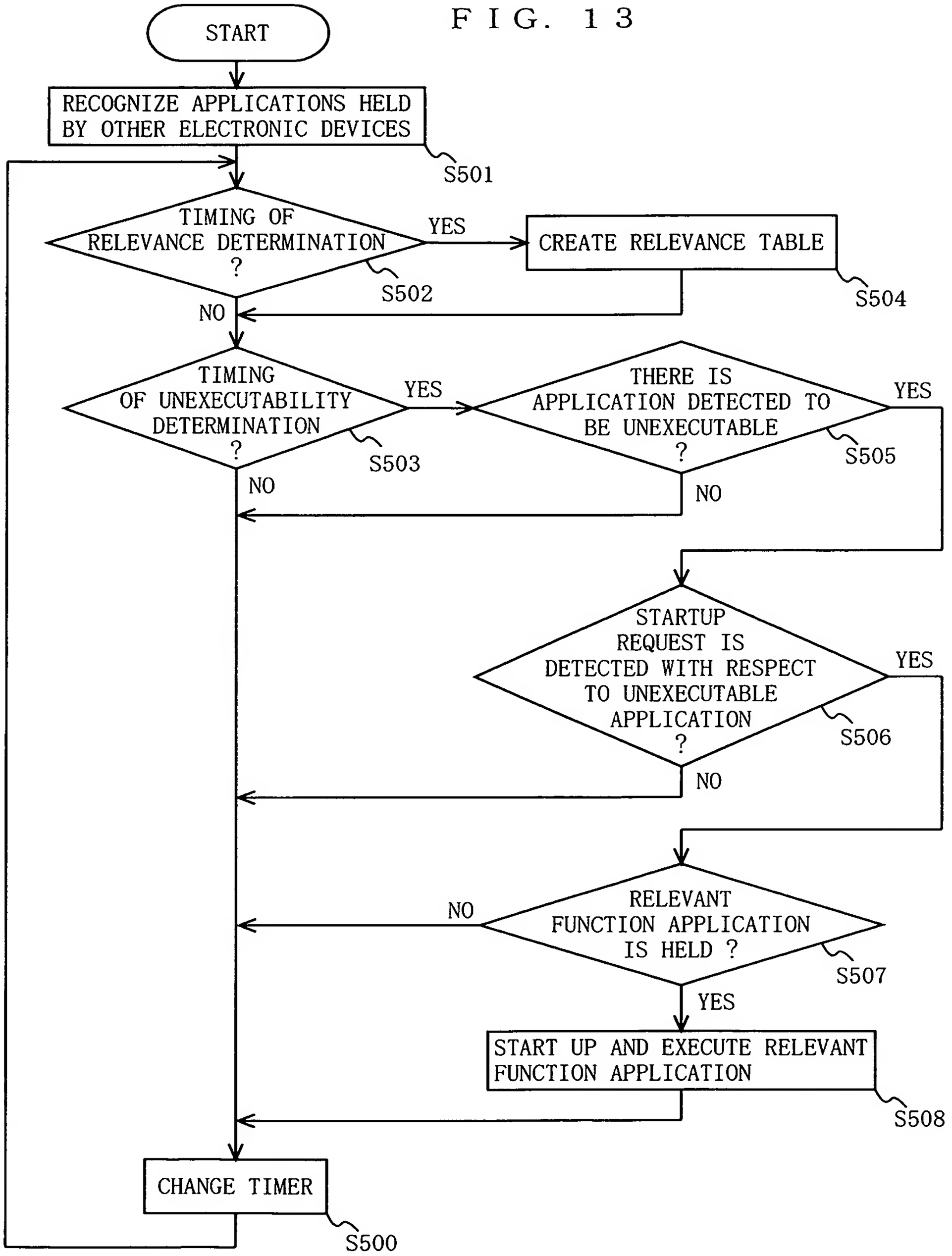
START
RECOGNIZE APPLICATIONS HELD BY OTHER ELECTRONIC DEVICES
S501
TIMING OF RELEVANCE DETERMINATION ?
YES
S502
CREATE RELEVANCE TABLE
S504
NO
TIMING OF UNEXECUTABILITY DETERMINATION ?
YES
S503
THERE IS APPLICATION DETECTED TO BE UNEXECUTABLE ?
YES
S505
NO
NO
STARTUP REQUEST IS DETECTED WITH RESPECT TO UNEXECUTABLE APPLICATION ?
YES
S506
NO
RELEVANT FUNCTION APPLICATION IS HELD ?
NO
S507
YES
START UP AND EXECUTE RELEVANT FUNCTION APPLICATION
S508
CHANGE TIMER
S500

FIG. 14

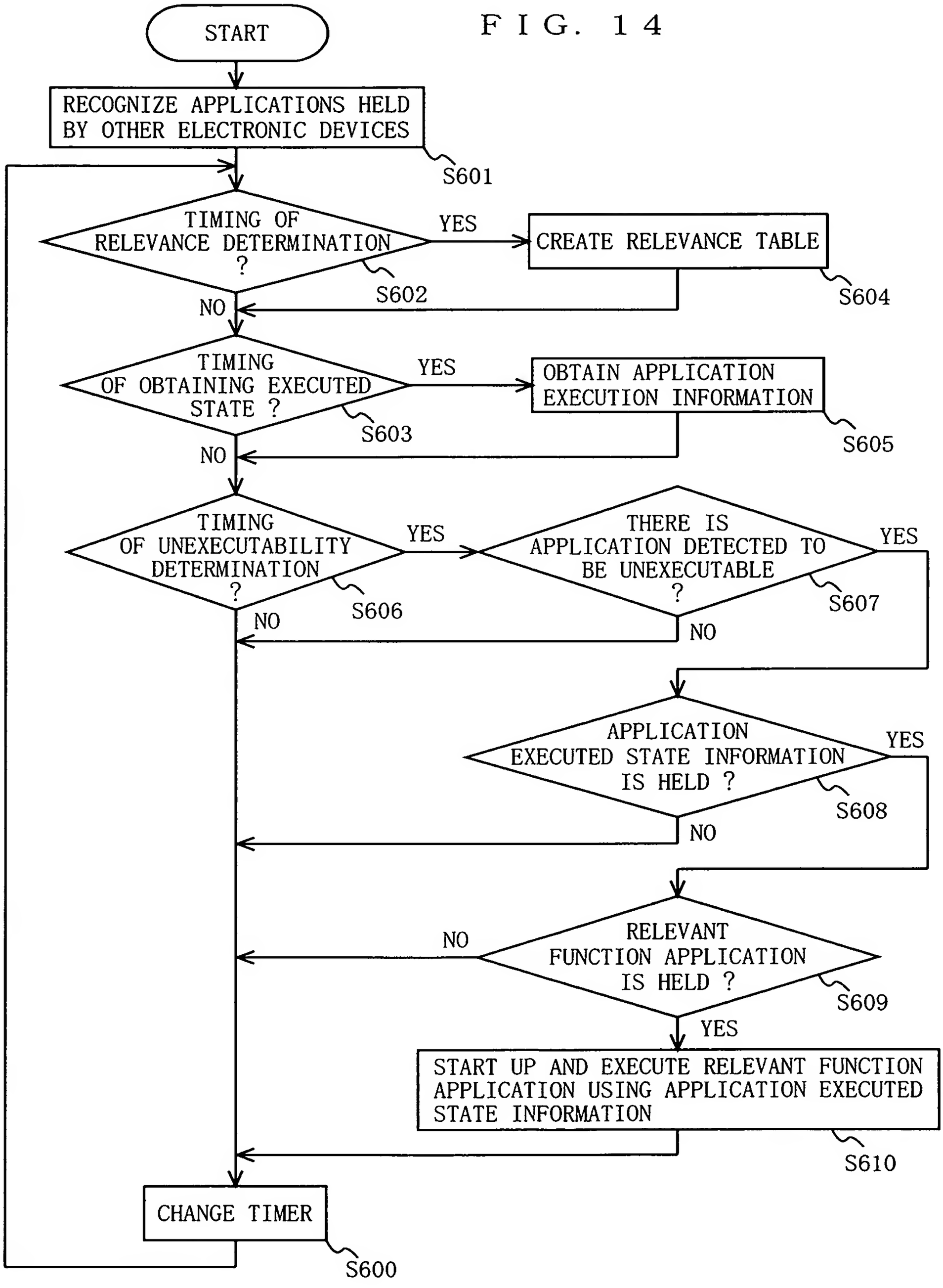
START
RECOGNIZE APPLICATIONS HELD BY OTHER ELECTRONIC DEVICES
S601
TIMING OF RELEVANCE DETERMINATION ?
YES
CREATE RELEVANCE TABLE
S602
S604
NO
TIMING OF OBTAINING EXECUTED STATE ?
YES
OBTAIN APPLICATION EXECUTION INFORMATION
S603
S605
NO
TIMING OF UNEXECUTABILITY DETERMINATION ?
YES
THERE IS APPLICATION DETECTED TO BE UNEXECUTABLE ?
YES
S606
S607
NO
NO
APPLICATION EXECUTED STATE INFORMATION IS HELD ?
YES
S608
NO
NO
RELEVANT FUNCTION APPLICATION IS HELD ?
S609
YES
START UP AND EXECUTE RELEVANT FUNCTION APPLICATION USING APPLICATION EXECUTED STATE INFORMATION
S610
CHANGE TIMER
S600

FIG. 15

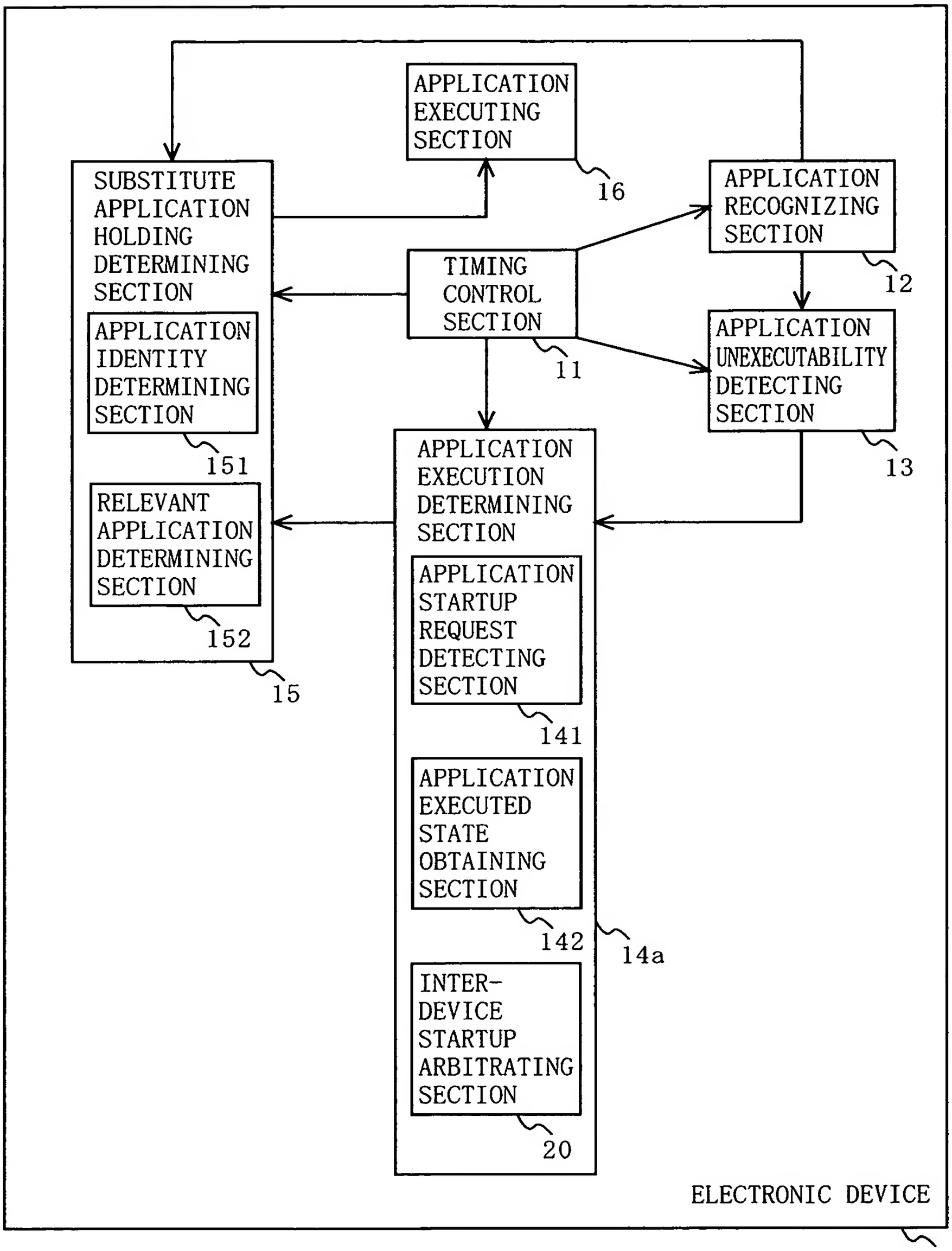
APPLICATION EXECUTING SECTION
16
SUBSTITUTE APPLICATION HOLDING DETERMINING SECTION
APPLICATION IDENTITY DETERMINING SECTION
151
RELEVANT APPLICATION DETERMINING SECTION
152
15
TIMING CONTROL SECTION
11
APPLICATION RECOGNIZING SECTION
12
APPLICATION UNEXECUTABILITY DETECTING SECTION
13
APPLICATION EXECUTION DETERMINING SECTION
APPLICATION STARTUP REQUEST DETECTING SECTION
141
APPLICATION EXECUTED STATE OBTAINING SECTION
142
14a
INTER-DEVICE STARTUP ARBITRATING SECTION
20
ELECTRONIC DEVICE
1, 3

FIG. 16

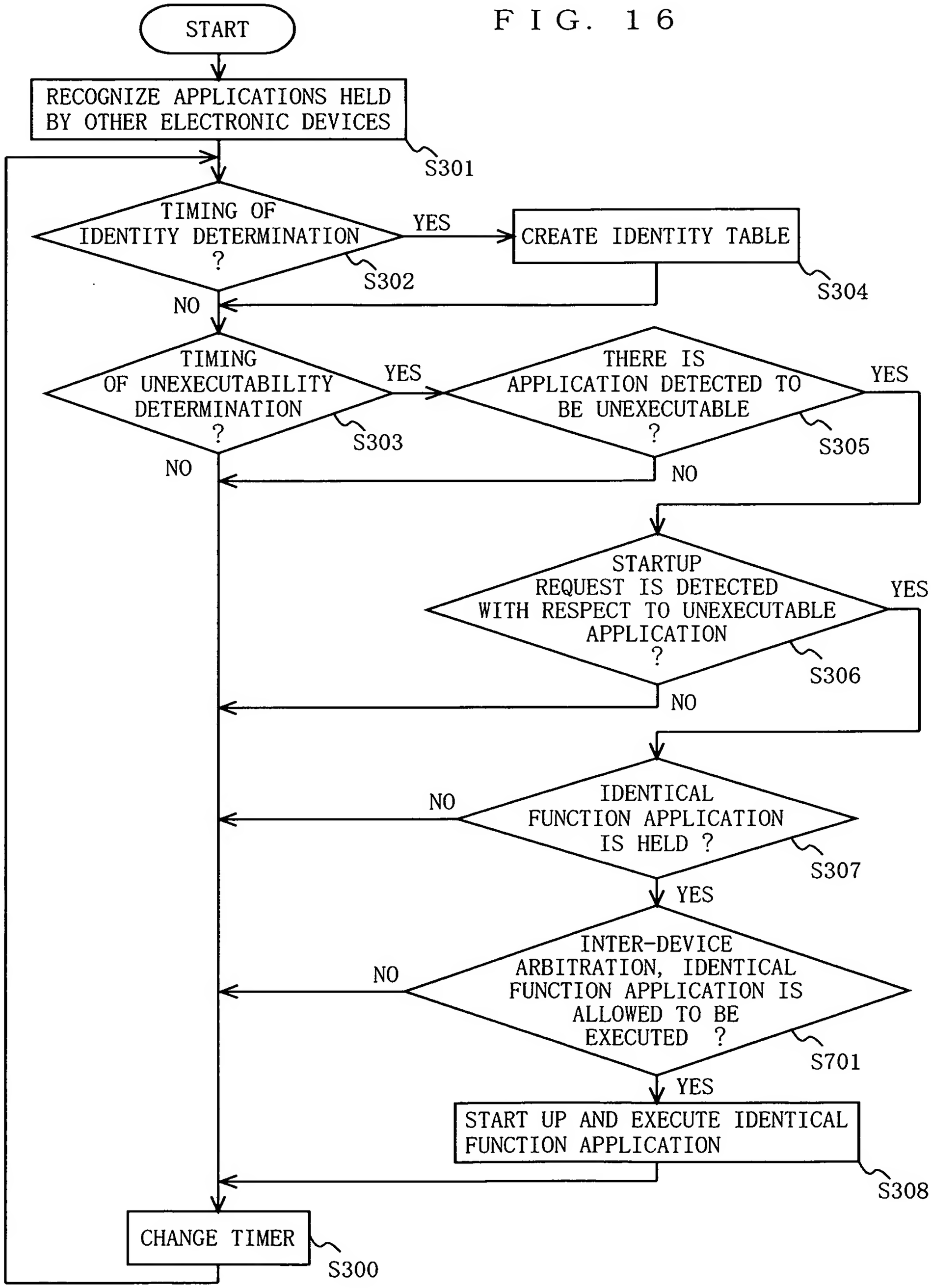
START
RECOGNIZE APPLICATIONS HELD BY OTHER ELECTRONIC DEVICES
S301
TIMING OF IDENTITY DETERMINATION ?
YES
S302
CREATE IDENTITY TABLE
S304
NO
TIMING OF UNEXECUTABILITY DETERMINATION ?
YES
S303
THERE IS APPLICATION DETECTED TO BE UNEXECUTABLE ?
YES
S305
NO
NO
STARTUP REQUEST IS DETECTED WITH RESPECT TO UNEXECUTABLE APPLICATION ?
YES
S306
NO
NO
IDENTICAL FUNCTION APPLICATION IS HELD ?
S307
YES
NO
INTER-DEVICE ARBITRATION, IDENTICAL FUNCTION APPLICATION IS ALLOWED TO BE EXECUTED ?
S701
YES
START UP AND EXECUTE IDENTICAL FUNCTION APPLICATION
S308
CHANGE TIMER
S300

FIG. 17

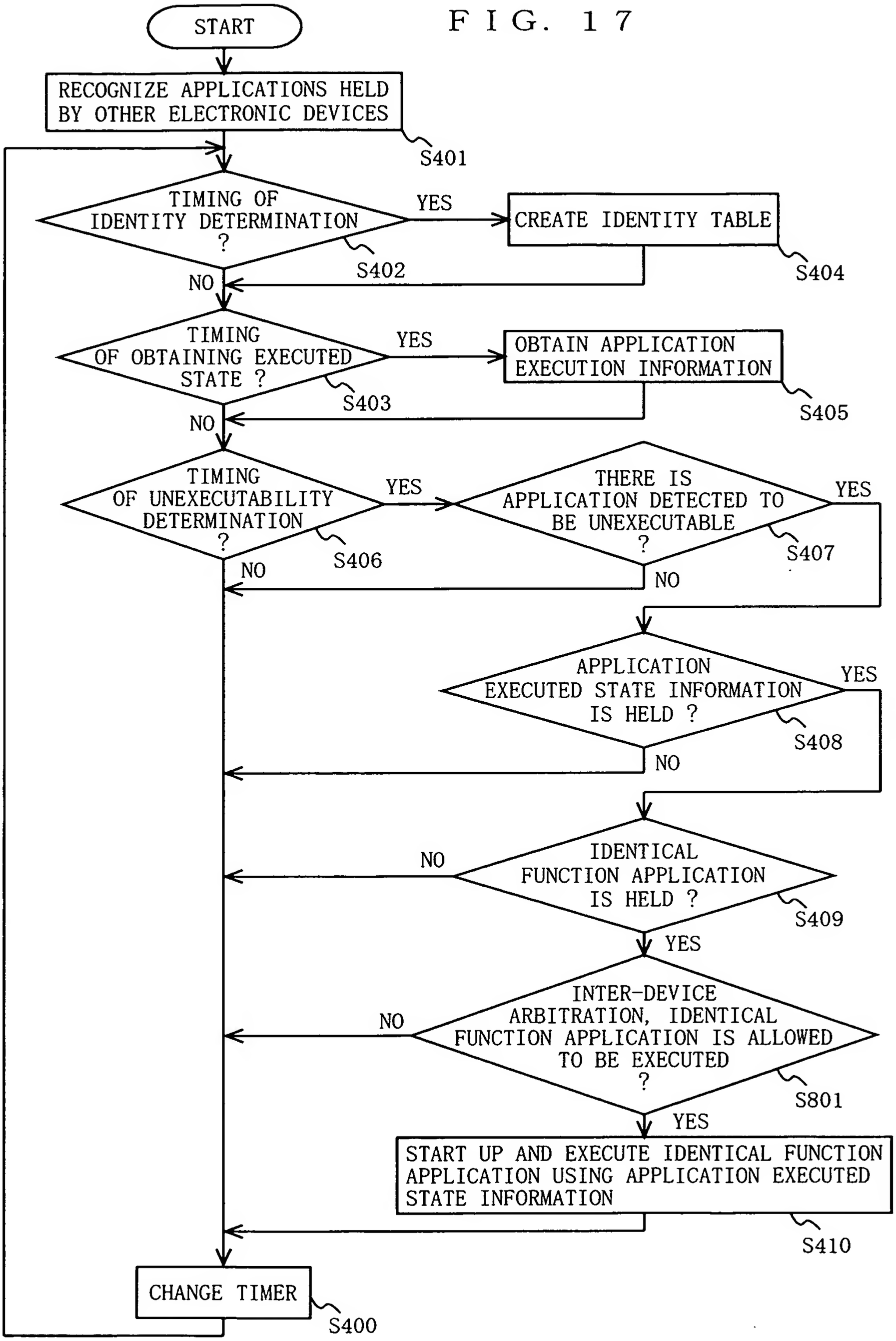
START
RECOGNIZE APPLICATIONS HELD BY OTHER ELECTRONIC DEVICES
S401
TIMING OF IDENTITY DETERMINATION ?
YES
CREATE IDENTITY TABLE
S402
S404
NO
TIMING OF OBTAINING EXECUTED STATE ?
YES
OBTAIN APPLICATION EXECUTION INFORMATION
S403
S405
NO
TIMING OF UNEXECUTABILITY DETERMINATION ?
YES
THERE IS APPLICATION DETECTED TO BE UNEXECUTABLE ?
YES
S406
S407
NO
NO
APPLICATION EXECUTED STATE INFORMATION IS HELD ?
YES
S408
NO
IDENTICAL FUNCTION APPLICATION IS HELD ?
NO
S409
YES
INTER-DEVICE ARBITRATION, IDENTICAL FUNCTION APPLICATION IS ALLOWED TO BE EXECUTED ?
NO
S801
YES
START UP AND EXECUTE IDENTICAL FUNCTION APPLICATION USING APPLICATION EXECUTED STATE INFORMATION
S410
CHANGE TIMER
S400

FIG. 18

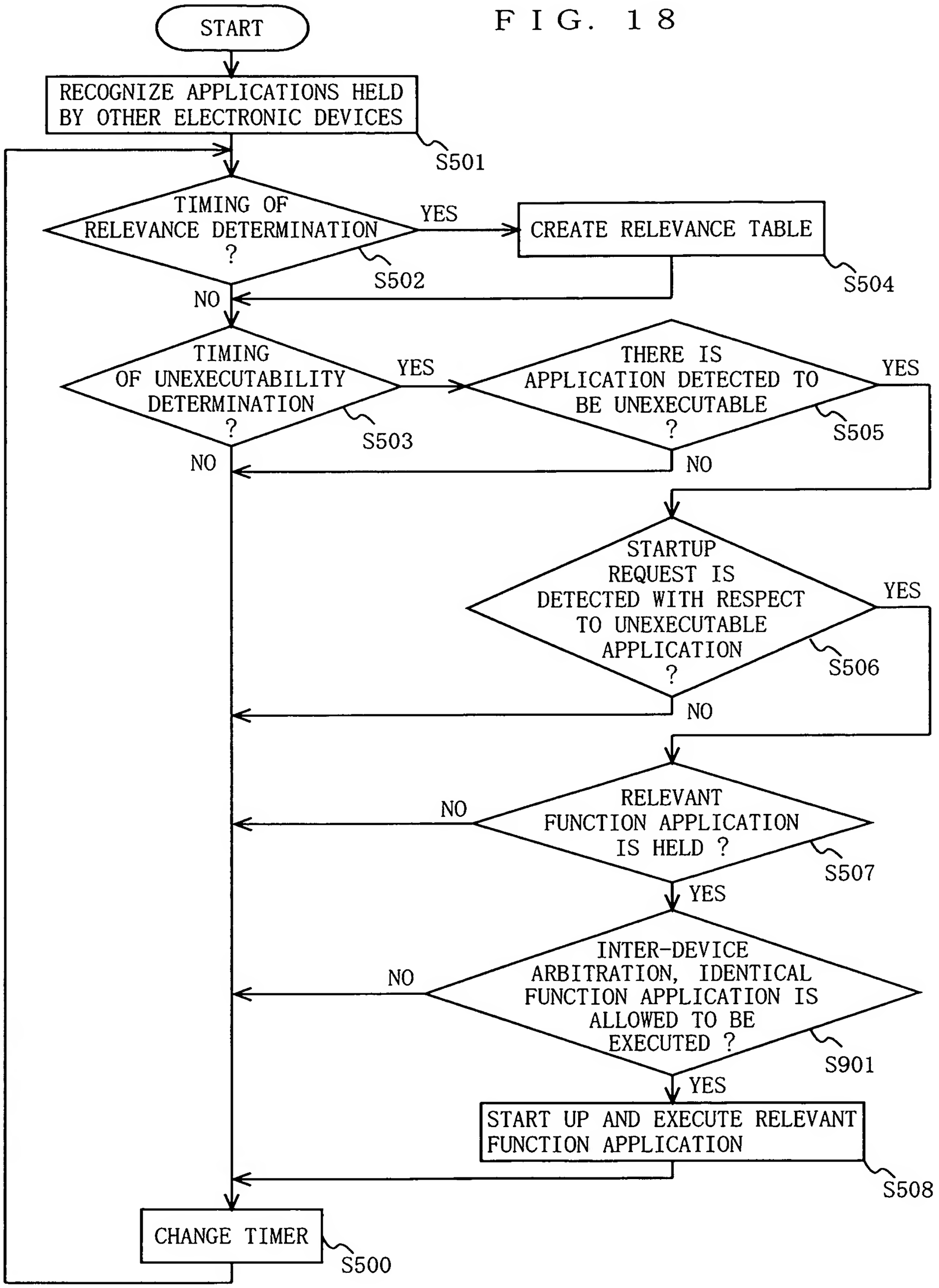
START
RECOGNIZE APPLICATIONS HELD BY OTHER ELECTRONIC DEVICES
S501
TIMING OF RELEVANCE DETERMINATION ?
YES
S502
CREATE RELEVANCE TABLE
S504
NO
TIMING OF UNEXECUTABILITY DETERMINATION ?
YES
S503
THERE IS APPLICATION DETECTED TO BE UNEXECUTABLE ?
YES
S505
NO
NO
STARTUP REQUEST IS DETECTED WITH RESPECT TO UNEXECUTABLE APPLICATION ?
YES
S506
NO
RELEVANT FUNCTION APPLICATION IS HELD ?
NO
S507
YES
INTER-DEVICE ARBITRATION, IDENTICAL FUNCTION APPLICATION IS ALLOWED TO BE EXECUTED ?
NO
S901
YES
START UP AND EXECUTE RELEVANT FUNCTION APPLICATION
S508
CHANGE TIMER
S500

FIG. 19

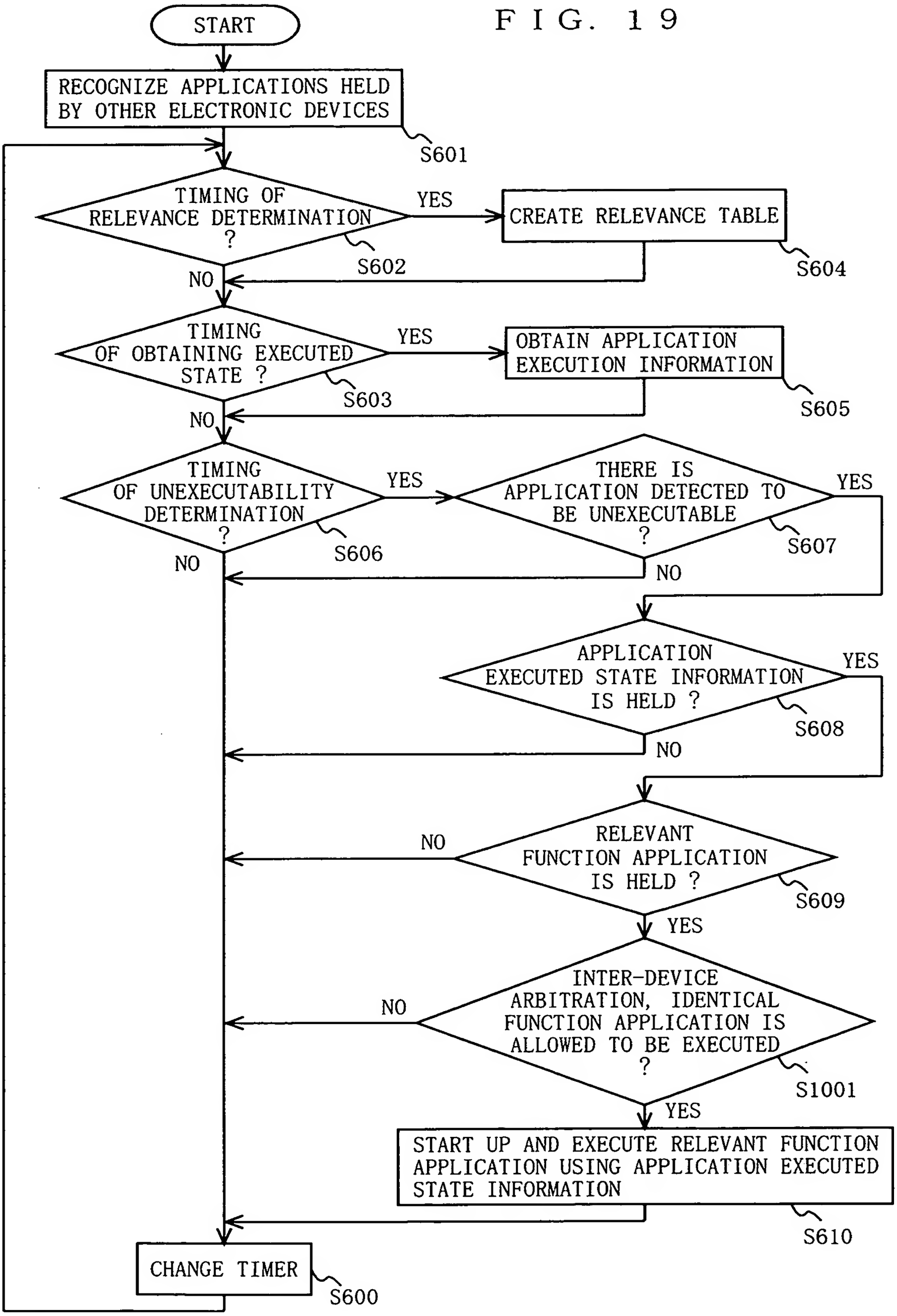
START
RECOGNIZE APPLICATIONS HELD BY OTHER ELECTRONIC DEVICES
S601
TIMING OF RELEVANCE DETERMINATION ?
YES
CREATE RELEVANCE TABLE
S602
S604
NO
TIMING OF OBTAINING EXECUTED STATE ?
YES
OBTAIN APPLICATION EXECUTION INFORMATION
S603
S605
NO
TIMING OF UNEXECUTABILITY DETERMINATION ?
YES
THERE IS APPLICATION DETECTED TO BE UNEXECUTABLE ?
YES
S606
S607
NO
NO
APPLICATION EXECUTED STATE INFORMATION IS HELD ?
YES
S608
NO
RELEVANT FUNCTION APPLICATION IS HELD ?
NO
S609
YES
INTER-DEVICE ARBITRATION, IDENTICAL FUNCTION APPLICATION IS ALLOWED TO BE EXECUTED ?
NO
S1001
YES
START UP AND EXECUTE RELEVANT FUNCTION APPLICATION USING APPLICATION EXECUTED STATE INFORMATION
S610
CHANGE TIMER
S600

FIG. 20

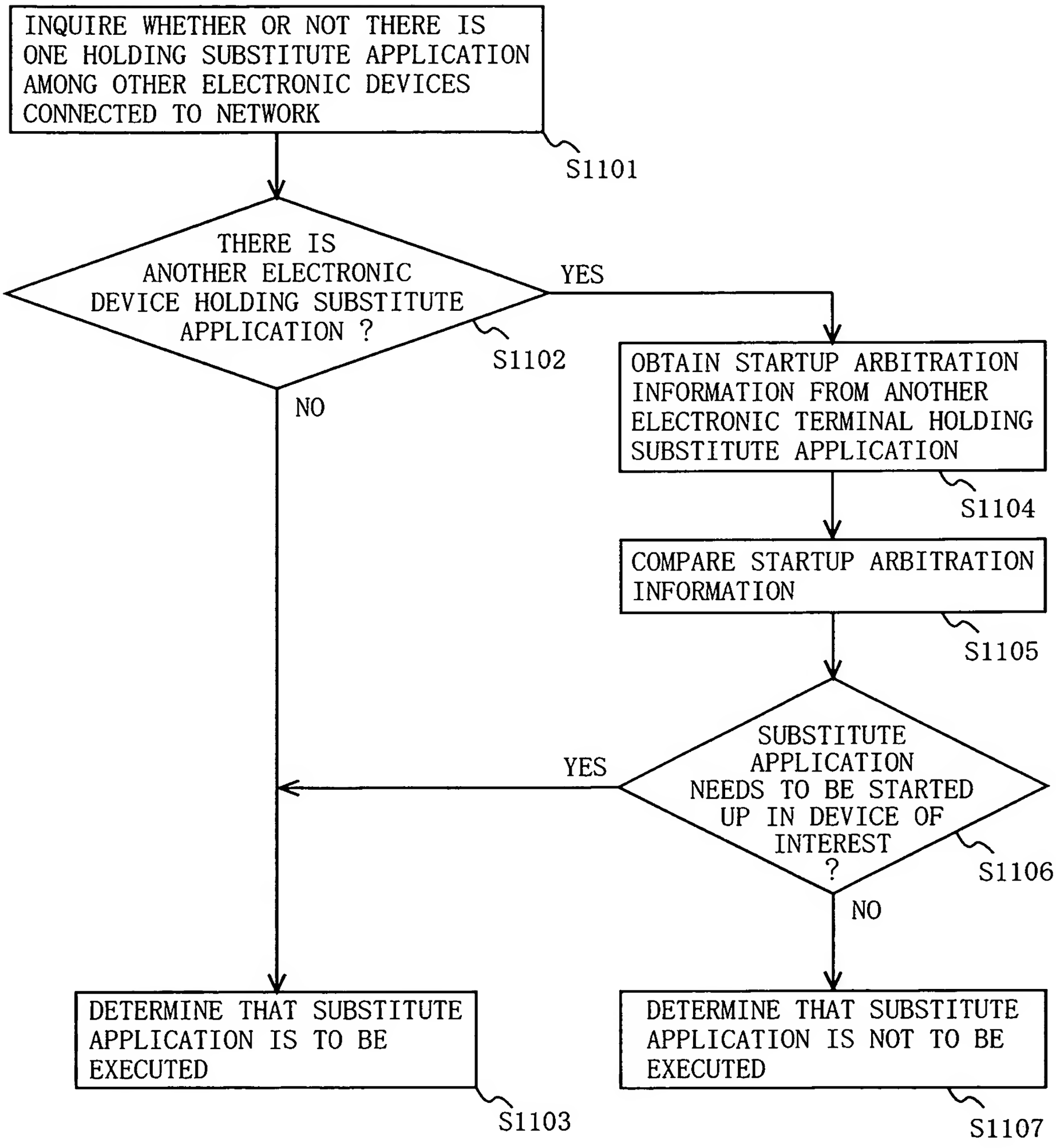
INQUIRE WHETHER OR NOT THERE IS ONE HOLDING SUBSTITUTE APPLICATION AMONG OTHER ELECTRONIC DEVICES CONNECTED TO NETWORK
S1101
THERE IS ANOTHER ELECTRONIC DEVICE HOLDING SUBSTITUTE APPLICATION ?
S1102
YES
NO
OBTAIN STARTUP ARBITRATION INFORMATION FROM ANOTHER ELECTRONIC TERMINAL HOLDING SUBSTITUTE APPLICATION
S1104
COMPARE STARTUP ARBITRATION INFORMATION
S1105
SUBSTITUTE APPLICATION NEEDS TO BE STARTED UP IN DEVICE OF INTEREST ?
S1106
YES
NO
DETERMINE THAT SUBSTITUTE APPLICATION IS TO BE EXECUTED
S1103
DETERMINE THAT SUBSTITUTE APPLICATION IS NOT TO BE EXECUTED
S1107

FIG. 21

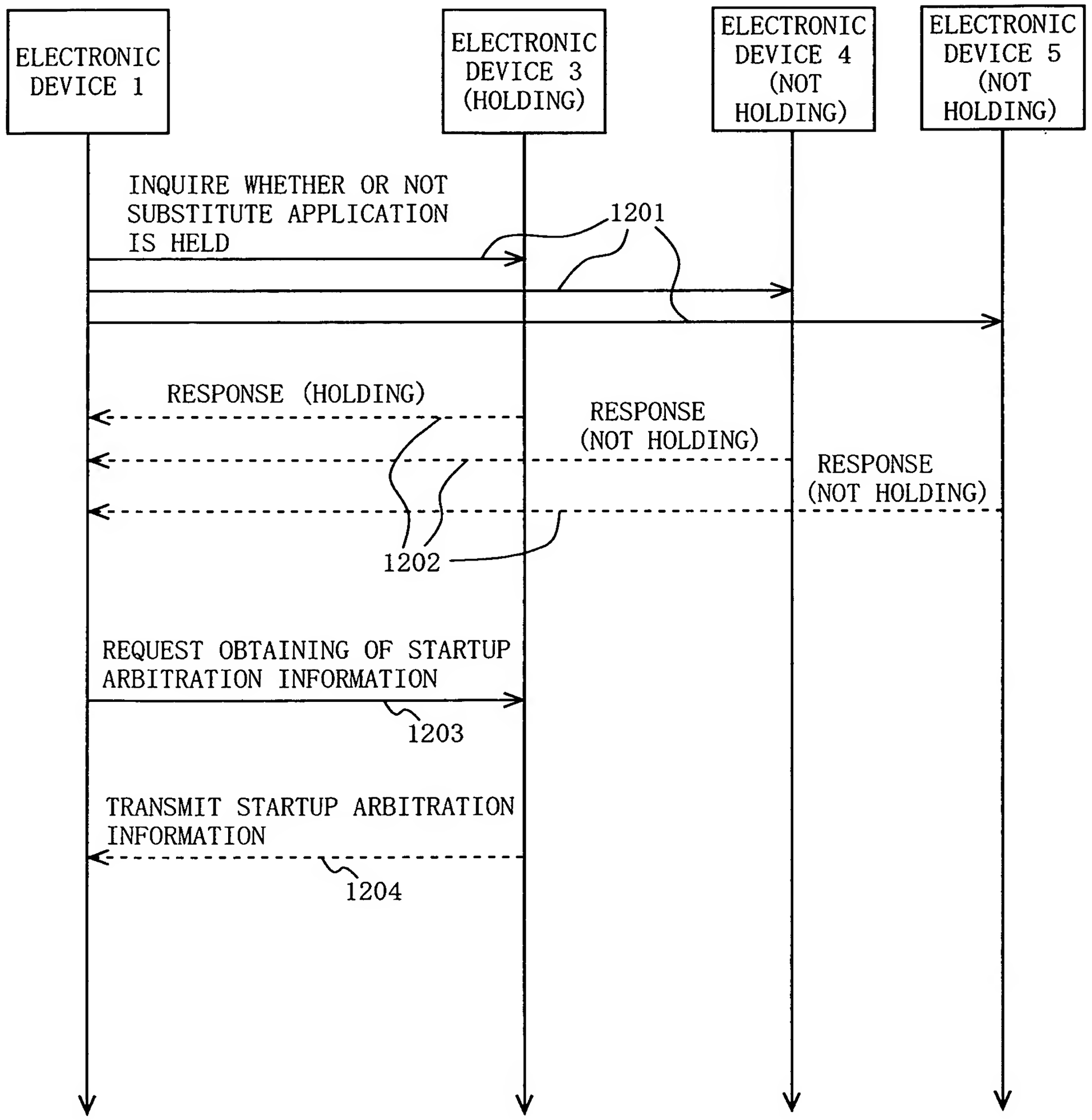
ELECTRONIC DEVICE 1
ELECTRONIC DEVICE 3 (HOLDING)
ELECTRONIC DEVICE 4 (NOT HOLDING)
ELECTRONIC DEVICE 5 (NOT HOLDING)
INQUIRE WHETHER OR NOT SUBSTITUTE APPLICATION IS HELD
1201
RESPONSE (HOLDING)
RESPONSE (NOT HOLDING)
RESPONSE (NOT HOLDING)
1202
REQUEST OBTAINING OF STARTUP ARBITRATION INFORMATION
1203
TRANSMIT STARTUP ARBITRATION INFORMATION
1204

FIG. 22

APPLICATION ATTRIBUTE INFORMATION	xxxxxxxxx
DEVICE IDENTIFICATION NAME	“STARFLOWER”
DEVICE TYPE	cellular phone
CPU	CPUxxR512 1.8GHz
OS	MicroOS2000
MEMORY CAPACITY	8,192KB
PROCESSOR USE RATE	62.5%
AVAILABLE RESOURCE AMOUNT	4,398KB
SET PRIORITY	3
LAST USER’S OPERATION DATE	2005/01/11 19:34:15